

Features

- Glass passivated chip junctions
- Ideal for automated placement
- Ultrafast reverse recovery time for high efficiency
- Low profile package
- High forward surge capability
- High temperature soldering: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC



SMA (DO-214AC)

Mechanical Data

- **Case:** JEDEC DO-214AC molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	50 V to 600 V
I_{FSM}	30 A
t_{rr}	35 nS
V_F	0.95 V, 1.25 V, 1.7 V
$T_j \text{ max.}$	150 °C

Maximum Ratings & Thermal Characteristics

($T_A = 25\text{ °C}$ unless otherwise noted)

Items	Symbol	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	35							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Note 1: Mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

Electrical Characteristics ($T_A = 25\text{ °C}$ unless otherwise noted)

Items	Test conditions	Symbol	ES1A~D	ES1E~G	ES1J	UNIT
Maximum Instantaneous forward voltage	$I_F=1A^{(2)}$	V_F	0.95	1.25	1.70	V
Maximum reverse current	$V_R=V_{DC}$	I_R	$T_J=25\text{ °C}$			μA
			$T_J=125\text{ °C}$			
Reverse recovery time	$I_F=0.5A$ $I_R=1A$ $I_{rr}=0.25A$	t_{rr}	35			nS
Typical junction capacitance	4.0 V, 1MHz	C_J	15			pF

Note 2: Pulse test: 300µs pulse width, 1% duty cycle.

Characteristic Curves ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

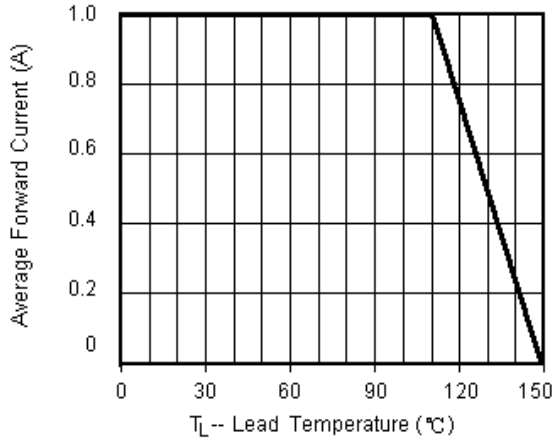


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

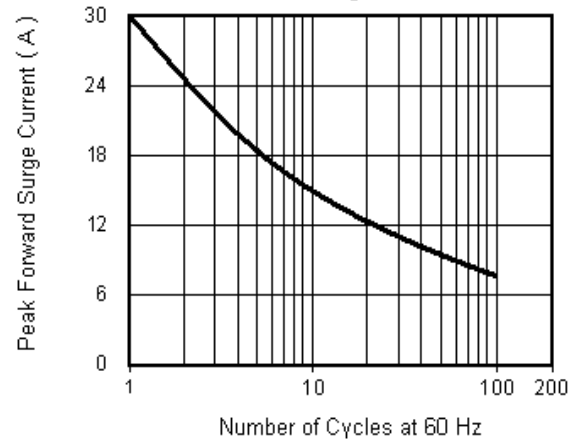


Fig.3 Typical Instantaneous Forward Characteristics

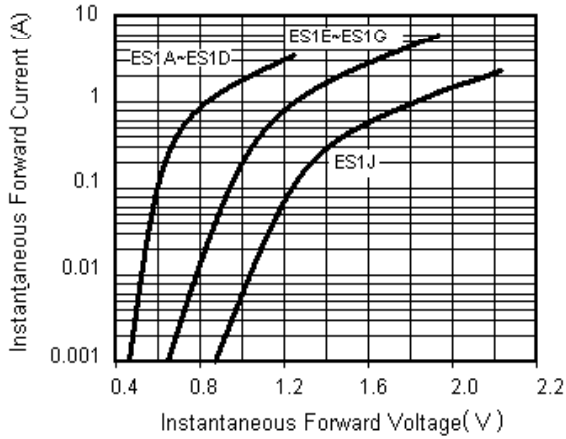
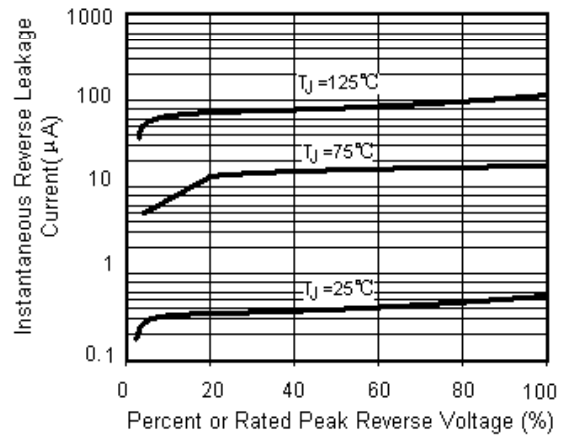


Fig.4 Typical Reverse Leakage Characteristics



Package Outline

SMA(DO-214AC)

